



**Task – T2321781**  
**Product Design Assessment (PDA)**  
**Monitoring System, Emissions**  
**PDA No.: 22-2321781-PDA**

Attention: Dear Samuel, ABB ENGINEERING (SHANGHAI) LTD (WCN: 408313)

The documents shown in the attached list are reviewed in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

Additionally, we acknowledge the PDA request form warranting that the materials used in the product(s) are free from asbestos.

For any clarifications, contact Lan-Lan, Li at +86-21-23270815 or [LanLanLi@eagle.org](mailto:LanLanLi@eagle.org)

Very truly yours,

Bin-Hong Wang  
Director of Engineering

Electronically Signed by: Hua-Lin, Li

Documents List

Drawing No.	Rev. No.	Title	Status
ULM04720220811001	-	Radiated Emissions and Electrostatic discharge	Reviewed

Electronic copies of the documents, appropriately stamped, are available in the ABS Client Portal.

Include: PDA Certificate



CERTIFICATE NUMBER 22-2321781-PDA  
EFFECTIVE DATE 22-Dec-2022  
EXPIRATION DATE 21-Dec-2027  
ABS TECHNICAL OFFICE CN Shanghai ESD

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

**ABB ENGINEERING (SHANGHAI) LTD**

located at

**NO. 4528 KANGXIN HIGHWAY, PUDONG NEW DISTRICT,  
SHANGHAI, China**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product Monitoring System, Emissions**

**Model GAA610-M**

This Product Design Assessment (PDA) Certificate remains valid until 21-Dec-2027 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Bin-Hong Wang, Director

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement

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Web: www.abb.com

**Tier: 2 - PDA Issued**

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**Product:** Monitoring System, Emissions

**Model:** GAA610-M

**Endorsements:**

**Intended Service:**

Emissions Measuring devices on Classed Vessels.

**Description:**

Exhaust gas monitoring device for CO<sub>2</sub>, SO<sub>2</sub>, O<sub>2</sub>(Option)

Exhaust Gas Analyzer: Uras26

**Rating:**

Power supply: 115/230 V, 50/60 HZ

Ambient Temperature: 45 Degree Celsius

Degree of Protection: IP 54

**Measuring Ranges:**

CO<sub>2</sub>: 0-20 vol. %

SO<sub>2</sub>: 0-250 ppm/ 0-500 ppm

O<sub>2</sub>(Option): 0-25 Vol. %

**Service Restriction:**

1. Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments:**

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. Each particular application and installation is to be specifically approved in conjunction with the relevant system. Equipment is not to be installed in weather exposed areas.
3. Installation, calibration and operation is to be in accordance with manufacturer's instruction.
4. Requirements of MEPC.340(77), Chapter 6.6 and 6.7 regarding SO<sub>2</sub> losses have to be observed.
5. Data recording and processing device is not covered by this certificate.
6. Compliance with the ABS Guide for Exhaust Emission Abatement has not been reviewed.
7. The subject system is assigned to the appropriate computer-based system Category II.

**Notes/Drawing/Documentation:**

Drawing No. Correspondence, Fee Confirmation, Revision: 0, Pages: 1

Drawing No. NA, PDA Request Form, Revision: 0, Pages: 1

Drawing No. ULM04720220811001, Radiated Emissions and Electrostatic discharge, Revision: -, Pages: 20 (Testing Laboratory: Unilab (Shanghai) Testing Technology Co., Ltd., Report No: ULM04720220811001, Date: 22-Aug-2022)

Drawing No. 12, dwg 3, Revision: 0, Pages: 1

Drawing No. 2, dwg 2, Revision: 0, Pages: 1

Drawing No. 2nd generation IOM, IOM, Revision: 0, Pages: 1

Drawing No. ABB GAA610M Test Report, Test Report, Revision: 0, Pages: 1 (Testing Laboratory: Unilab (Shanghai) Co., Ltd, Report No: ULM04720180327001, Date: 18 May 2018)

Drawing No. Bundle Information, Information, Revision: 0, Pages: 1

Drawing No. Components Data Sheet, Data Sheet, Revision: 0, Pages: 1

Drawing No. Hook Up Drawing, Dwg, Revision: 0, Pages: 1

Drawing No. TEST RECORD, Test Report, Revision: 0, Pages: 1 (Testing Laboratory: 704 Research Institute of China Shipbuilding Heavy Industries, Report No: S714-ZD(1)-2018, 5 January 2019)

Drawing No. SDLC, Document, Revision: 0, Pages: 1

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**Terms of Validity:**

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**STANDARDS**

**ABS Rules:**

1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-3/1.7, 4-8-3/1.9, 4-8-3/1.11, 4-8-3/1.17, 4-9-9/13.1 and 4-9-9/Table 1 of Marine Vessel Rules (2022)

1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-1/11, 4-3-1/15, 4-3-1/17, 6-1-7/1 of Mobile Offshore Unit Rules (2022)

**National:**

NA

**International:**

MEPC.340(77) - 2021 Guidelines for Exhaust Gas Cleaning Systems

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA